

FIGURE 1



FIGURE 1B

840 224	CGTTGAGAAGCTCCAAGGGTCGGATCCTCACCATGGCGAACCAGGTCCTGGCTGT V E K L I S K G R I L T M A N Q V L A V	781 205
780 204	GGGTCTCTCTAAACTGCAGGAGTTGGTGCGGTACCACACCACCACGGCCAGCTGAC G L S K L Q E L V R Y H I Y N H G Q L T	721 185
720 184	CCCAAGCAATGAGGCTGTGGACGCCGCCTGATCTACCTCTTCACAGC PSNEAVDSLRDGRLIYLFTA	661 165
660 164	CCTGGAGAACTGTGGGCTGCCTCCATCCTGGACGGACCTGGGCCCTTCACAGTCTTTGC L E N C G L P S I L D G P G P F T V F A	601 145
600 144	CAAGAGAACTATCGGACAGACCTTCAGGCCTTTCAGCCGTTTGAAACCAT K R T I G Q I L A S T E A F S R F E T I	541 125
540 124	CGTCTTCCACGTGGTCACTGCGGTGGCAGGCCCCCTCTGGGACCCCTGGGGATCC V F H V V T G L R W Q A P S G T P G D P	481 105
480 104	CAAAGACCAGCCGCAGACGTTCAACATCTACAAGGCCAACAACATAGCAGCTAATGG K D Q P Q Q T F N I Y K A N N I A A N G	421 85





FIGURE 1C

1260	CGGGCCTGACTGCAGGTGTCCTGGGGGCTTCTCCAACCCCTGCTATGGCAAAGGCAA	1201
364	G P D C T Q C P G G F S N P C Y G K G N	345
1200	GGGCTGTGCCAGCTACTACCAACCATGGAACAAGGCTGCTGCAAGGTTTTTT	1141
344	G C A S Y C N Q T I M E Q G C C K G F F	325
1140	CATCTTCCCCAAGGAGTGTGTCTACATCCATGACCCAACGGGGCTCAATGTGCTAAAGAA	1081
324	I F P K E C V Y I H D P T G L N V L K K	305
1080	CTGTGTGGACTGCCAAGCCCCGACGTGTCCCCCCAACAGTGTGAAGCTGGA	1021
304	C V D C Q A L N T S T C P P N S V K L D	285
1020 284	CATCCTGCCCATCCTGCCAAGCACTGCAGCAGCAGCACAAGATTGTGGCGGGCTC I L P I L P K H C S E E Q H K I V A G S	961 265
960	AGACGTGATGCCCCCAATGCCGACTCCTGGACGCCATCCTGCTGCCCCCCGAC	901
264	D V M A A N G V I H M L' D G I L L P P T	245
900 244	GAACATTTCTGAGGGGGGGCGTCCTGCTGGGACCCGAGGGGTCCCGCTGCAGGGT $oldsymbol{N}$ $oldsymbol{N}$ $oldsymbol{I}$ $oldsymbol{S}$ $oldsymbol{E}$ $oldsymbol{G}$ $oldsymbol{C}$ $oldsymbol{$	841 225



FIGURE 1D

1320	1380	1440	1500	1560	1620	1680
384	404	424	444	464	484	504
TTGCAGTGATGGGGCAATGGGGCCTGCCTCTGCTTCCCAGACTACAAGGGCAT ${\sf C}$	CGCCTGCCACATCTGCTCGAACCAAACAAGCATGGAGAGACAATGCCAGGAAGACTGCGG A C H I C S N P N K H G E Q C Q E D C G	CTGTGTCCATGGTCTCTGCGACAACCGCCCAGGCAGTGGGGGGGG	GTGTGCCCCTGCCTTCAGTGCCCGGTTCTGCAACGAGTCCATGGGGGACTGTGGGCCCCAC	AGGGCTGGCCAGCACCTGCATGCCCGCTGTGTTAGCCAGGAGGGTGTTGCCAGGCCAGGAGGGTGTTGCCAGGCAGG	ATGTCGCTGTCTTGATGGCTTTGAGGGTGATGGCTTCTCCTGCACCCTTAGCAACCCCTG $\overline{\mathbb{C}}$ \mathbb{C} \mathbb{L} \mathbb{D} \mathbb{G} \mathbb{E} \mathbb{G} \mathbb{D} \mathbb{G} \mathbb{E} \mathbb{S} \mathbb{C} T P S N P C	CTCCCACCCGGACCGTGGAGGCTGCTCAGAGAATGCTGAGTGTCCCTGGGTCCCTGGG S H P D R G G C S E N A E C V P G S L G
1261	1321	1381	1441	1501	1561	1621
365	385	405	425	445	465	485

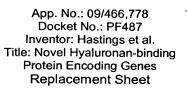


FIGURE 1E

1740	1800	1860	1920	1980	2040	2100
524	544	564	584	604	624	644
CACCCACCACTGCCACAAGGCTGGAGTGGGCGGCGCGTCTGTGTGGCTAT THH \subseteq	TGACGAGTGTGAGACGTGGCTGCCACACCGATGCCCTCTGCAGCTATGT DECELDVRGGCCCCACACCGATGCCTTCTGCAGCTATGT	. GGGCCCCGGGCAGCCGATGCAGCTGCGGCTTTGCCGGGGATGCTACCAGTG G P G Q S R $\underline{\mathbb{C}}$ I $\underline{\mathbb{C}}$ K $\underline{\mathbb{L}}$ $\underline{\mathbb{G}}$ F $\underline{\mathbb{A}}$ G $\underline{\mathbb{G}}$ D $\underline{\mathbb{G}}$ Y $\underline{\mathbb{Q}}$ $\underline{\mathbb{C}}$	CAGCCCCATGGACCCTGCCGGCAGGCAATGGCGGCTGCCACGGCCTGGAGGC S P I D P C R A G N G G C H G L E L E A	AAATGCCCACTTCTCTACCAATGGCTTAAGAGTGCCGGCATCACGCTTCCTGC N A H F S I F Y Q W L K S A G I T L P A	CGACCGCCGAGTCACAGCCCTGGTGCCCTGCAGCCCGAGCCCCGA D R R V T A L V P S E A A V R Q L S P E	GGACCGAGCTTTCTGGCTGCCAAGGACGCTGCCGAACCTGGTCAGGGCCCATTTTCT DRAFWLQPRTTL
1681	1741	1801	1861	1921	1981	2041
505	525	545	565	585	605	625



2160	2220	2280	2340	2400	2460	2520
664	684	704	724	744	764	784
CCAGGGTGCCCTCTTCGAGGAGCTGGCCCGGCTGGGTGGG	GAACCCCACCACCACGTGGGAGTTCGCAACATTAGTGGGAGGGTCTGGGTGCAGAATGC NPTTRWEIRNISGRVWVQNA	CAGCGTGGATGTGGCTGCCTTGCCACCGTGTGTCCTACACATCCTCAGCCAGGT S V D V A D L L A T N G V L H I L S Q V	CTTACTGCCCCCCGAGGGGATGTGCCCGGTGGGCAGGGGTTGCTGCAGCAGCTGGACTT L L P P R G D V P G G Q G L L Q Q L D L	GGTGCCTGCCTTCAGCCTCTTCCGGGAATTGCTGCAGCACCATGGGTTGGTGCCCCAGAT V P A F S L F R E L L Q H H G L V P Q I	TGAGGCTGCCACCTACACCATCTTTGTGCCCACCAAACCGCTCCCTGGAGGCCCAGGG E A A T A Y T I F V P T N R S L E A Q G	CAACAGCAGTCACCTGGACGCACACAGGGCACCCTGTGGGGGGGG
2101	2161	2221	2281	2341	2401	2461
645	665	685	705	725	745	





S H A E A L R E K C V CAGGGCTTCCAGCTGCAGGAAG Q G F Q L Q D T P R K CTTCTCCGGGGCTGCTCTTACACATGTGCCAAG F S R G C S Y T C A K GGTTTCTTTGGCACGCTGTGTGAGCCATGCCCA G F G T L C E P C P	GAGATTCCGCTGCACTCCAGCTGCAGGACACACCCCAGGAAGAGCTGTGTCTA R F R C T Q G F Q L Q D T P R K S C V Y CCGATCTGGCTTCTCCCGGGGCTGCTCTTACACATGTGCCAAGAAGATCCAGGT R S G F S F S R G C S Y T C A K K I Q V GCCGGACTGCTGCTGTTTTTTTTTTTTTTTTTTTTTTT
S H A E A CAGGGCTTCCAGCT Q G F Q L CTTCTCCCGGGGCTG F S R G C GGTTTCTTTGGCAC G F F G T	GAGATTCCGCTGCACTCAGGGCTTCCAGCT R F R C T Q G F Q L CCGATCTGGCTTCTCCCGGGGCTG R S G F S F S R G C GCCGACTGCTGCTTTTTGGCAC P D C C P G F G T
	GAGATTCCGCTGCAC' R F R C T CCGATCTGGCTTCTCC R S G F S GCCGGACTGCTGCCC'



FIGURE 1H



FIGURE 11

378(1204	CTTCAGCCTCCGCCTCCTGGAATATAAGGAGCTCCAAGGGCGATGGGCCTTTCACCATCTTFF S L R L L E Y K E L K G D G P F T I F	3721 1185
3720 1184	CGGCCTCACCTGCCGAGTCGGCCTGGAGCTCCTGAGGGATAAGCATGCCTCATT G L T C R A R V G L E L L R D K H A S F	3661
366(CAAAAGCACAGGGGATGGCCAGAGACATGTACCTGCGACACACAC	3601 1145
3600	. CTGCGAGCTCCTGGACCTCTAAGAACAATGGAGGATGCAGCCCATATGCCACCTG \underline{C} E L L D P C S K N N G G C S P Y A T C	3541 1125
354(1124	TGGCCCCCCAGCAGGTCTCCTGCAGCTGAGGGTTACAGCGGGGATGGCATCCGGAC 6 P Q Q V S <u>C S C</u> R E G Y S G D G I R T	3481 1105
348(1104	AATTAACAGCTGTCTCATCCACCACGGGGGTGCCACTCCCCAC I N S C L I H H G G C H I H A E C I P F	3421 1085
342(1084	TGGGCAGCGGACATGCACCTGCCAGGATGGCTACATGGGCGACGGGGGGGG	3361 1065



FIGURE 1J

4200 1344	CAAGATCTTCAGCGGCCTCCTGCCTCCTGCCTTCGAGAGGCATC K I F S G L L K V A G L L P L L R E A S	4141 1325
4140	GCCTGATGATGCTCCCATCCCGAGGAGAATGTCACCGCCGCCGCCCAGGGCTTCGGTTA	4081
1324	P D D A P I P R R N V T A A A Q G F G Y	1305
4080	GAACGGCATCCTGCACTTCATTGACCGTGTCCTGCTGCCCCCGAGGCGCTGCACTGGGA	4021
1304	N G I L H F I D R V L L P P E A L H W E	1285
4020	GGAGGGCAGCATATACCTCAATGACTTCGCGCGCGTGGTGAGCCAGCGACCATGAGGCCGT	3961
1284	E G S I Y L N D F A R V V S S D H E A V	1265
3960	CCTGCTGGAGCAGGGGTACGCCACCGCCCTCTCAGGGGCACCCCACTGCGCTTCAGCGAGAG	3901
1264	L L E Q G Y A T A L S G H P L R F S E R	1245
3900	GCATCGCCAGCTGTTTCGCTACCACGTGGTTGGCTGTCGGCGGCTGCGGAGCGAGGA	3841
1244	H R Q L V F R Y H V V G C R R L R S E D	1225
3840 1224	CGTGCCGCACGCAGATCTAATGAGCAACCTGTCGCAGATGCGGATTCGTGC V P H A D L M S N L S Q D E L A R I R A	3781 1205



FIGURE 1K

4620 1484	GACCCGGCCCCTGCGACTCTGCAGCTTGGGGCTGGAGCCACCCTGTCCTGA	4561 1465
4560 1464	CTATGGCATCGACCAGCTGCACCTGGCCTTGGTGCTCGCTGTGACCACTTTGA Y G I D Q L L E P P G L G A R C D H F E	4501 1445
4500	GGTGGGTGAGGATGATGCTCCAGCGCCACTTGCCCTTTTGAGGGTGGCCTGGC V G E D D A R I V Q R H L P F E G G L A	4441 1425
4440 1424	AACCATGCATGGGACCCCCATCTTTTTTTCTCTGCAGCCGAACGCGGGCCCGGTGAGCTCAT T-M-H-G-T-P-I-S-F-S-C-S-R-T-R-P-G-E-L-M	4381 1405
4380 1404	CCACATGATTCGCAATGTCGAGGCCTTGGCATCTGACCTGCCCAACCTGGGCCCACTTCG H M I R N V E A L A S D L P N L G P L R	4321 1385
4320 1384	TCGCCAGGCCTGTACCATGAGGACCACCGTGACAAGCTAGCAGCCATTCTGCGGGG R Q A W L Y H E D H R D K L A A I L R G	4261 1365
4260 1364	CCATAGGCCCTTCACAATGCTGTGGCCCACAGACGCCGCCTTTCGAGCTCTGCCTCCGGA H R P F T M L W P T D A A F R A L P P D	4201 1345



FIGURE 1L

5040 1624	TTGTCAAGCCTGCCGCTGTGCATGGCCGCTGTGATGAGGGCCTTTGGGGGCTCTGG C Q A C R C T V H G R C D E G L G G S G	4981 1605
4980 1604	. CCGTTCAGGTTTTGCTGGGACAGCCTGTGAACTCTGTGCTCCTGGTGCCTTTGGGCCCCA R S G F A G T A C E L C A P G A F G P H	4921 1585
4920 1584	. CCCTTGTAGTGACCGTGTGCATGGACGCCATGAGTGGCAGTGGCAGTGTCTGTG P C S D R G V C M D G M S G S G Q C \underline{L} \underline{C}	4861 1565
4860 1564	CAGCTGCTGCCCTGGTCACTGAGTGCCAAGCTTGCCCTGGCGGCCCCAGCAG	4801 1545
4800 1544	TAGGCCCCAAGGCCAGGGGCTGCCACCACCACCACCTGGAAGCC R P Q G L G R G C H R N C V T T T W K P	4741 1525
4740 1524	GTCCCCTCCGCTGCACTTTTACGCAGCGTCTGGGTCCACCCCAGCCTTTGGGG S P P L H S L G L R S V W V H P S L W G	4681 1505
4680 1504	GGGGTCACAGGAGCAGCCCTGAGGCCTGCTGGCGCTTCTACCCGAAGTTCTGGAC G S Q E Q G S P E A C W R F Y P K F W T	4621 1485

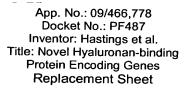




FIGURE 1M



FIGURE 1N

5880 1904	CTACTGCTTCCGTGTGCAAGATGTGGCCTGCCGAAATGGCTTCGTGGGTGACGG X C F R V O D V A C R C R N G F V G D G	5821 1885
5820 1884	TGGTCGGGTGGCCTTGGGTGCCCGCAAGAACCTCTCAGAACGCTGGGATGC G R V G I V S L G A R K N L S E R W D A	5761 1865
5760 1864	**************************************	5701 1845
5700 1844	**************************************	5641 1825
5640 1824	**************************************	5581 1805
5580 1804	CACTGACCTGCACTTCCAGGAGAAACGGGCTGGCGTTTTCCACCTCCAGGCCACCAGCGG	5521 1785
5520 1784	GGAACCACCTGTGGACCGCTTGGGCCAGCCACCGCCCTGCCACTCAGATGCCATGTG EPVDRCLGCTGCTTGGGCCAGCCACCGCCTGCCACTCAGATGCCATGTG	5461 1765



FIGURE 10



FIGURE 1P

Y L R A R G K P M G F G F S A F Q A E D TGATGCTGATGACGANTTCTCACCGTGGCAAGAGGGACCAACCCCACNTTGGTNTNTGT D A D D X F S P W Q E G T N P T L V X V CCCCAACCCTGTCTTTGGCACCACCCTTTTGTGAACCCTTCGATGACTCACTGCTGGA P N P V F G S D T F C E P F D D S L L E GGAGGACTTCCCTGACACCCAGAGGATCCTCACAGTCAAGTGACGAGGCTGGGGCTGAAA E D F P D T Q R I L T V K * GCAGAAGCATGCACAGGAGCCANTTTTATTGCTTGTCTGGGTGGGTGGAGGA	CCCCAACCCTGTCTTTGGCACACCTTTTGTGAACCCTTCGATGACTCACTGCTGGA	TGATGCTGATGACGANTTCTCACCGTGGCAAGAGGGACCAACCCCACNTTGGTNTNTGT D A D D X F S P W Q E G T N P T L V X V	CTAC		1 GGCAGGCGTGGGGCTTGCCGCTGGAGCACTGCTTGGCTGGC
481 TGATGCT 105 D A 125 P N 601 GGAGGAC 145 E D 661 GCAGAAG	541 (125	481 105	T 1 C00	6421 CTACCTCCGTGC	361 GGCAGGC 065 A G 421 CTACCTC

GGGNCTGAGGCCTGTCCCAGACAATANNNGTNCCCTCGAG 6761



FIGURE 2A

420 130	**************************************	361
360 110	GAGAAACGGGCTGGCGTTTTCCACCTCCAGGCCACCAGCGGCCCTTATGGTCTGAACTTT E K R A G V F H L O A T S G P Y G L N F	301 91
300	TGCTTGGGCCAGCCCCCGCCCTGCCACTCAGATGCCATGTGCACTGACCTGCACTTCCAG C L G Q P P P C H S D A M C T D L H F Q	241 71
240 70	GCAGGCTACGTAGGCGATGAGTGTCTGGAGGAGTCGGAACCACCTGTGGACCGC A G Y V G D G L Q C L E E S E P P V D R	181 51
180 50	TGCAGCGAGCACGCCTTGAGCACCGGCCTGAACACACGGCGCTGTGAGTGCCAC C S E H A N C L S T G L N T R R C E C H	121 31
120 30	GAGGGTGATGGCTGCCGGGCCCGCAACCCCTGCACAGATGGCCACCGCGGGGC E G D G W S C R A R N P C T D G H R G G	61
60	GAGCACGCCAACTGTAGGAACAATGGTCACTTGTACCTGCCTG	H



FIGURE 2B

421 131	TCTGCTGCCCAGCAGCTTCCACCTGTGCCTCATGGGCTGGCCAATGGCTCC S A A Q Q L G F H L C L M G W L A N G S	480 150
481 151	**************************************	540 170
541 171	AGCCTGGGTGCCCGCAAGAACCTCTGGGATGCCTACTGCTTCCGTGTGCAA S L G A R K N L S E R W D A Y C F R V O	600
601 191	GATGTGGCCTGCCGAAATGGCTTCGTGGGTGACGGGATCAGCACGTGCAATGGG \overline{D} \overline{V} \overline{A} \underline{C} \overline{R} \underline{N} \underline{G} \underline{F} \underline{V} \underline{G} \underline{D} \underline{G} \underline{I} \underline{S} \underline{I} \underline{C} N G	660 210
661 211	AAGCTGCTGGATGTGCTGCCACTGCCAACTTCTCCCACCTTCTATGGGATGCTATTG K L L D V L A A T A N F S T F Y G M L L	720
721 231	GGCTATGCCAATGCCACCCAGCGGGTCTCGACTTCCTGGACTTCCTGGATGATGAGCTC G Y A N A T Q R G L D F L D F L D D E L	780 250
781 251	ACGTATAAGACACTCTTCGTCCTGTCAATGAAGGCTTTGTGGACAACATGACGCTGAGT T Y K T L F V P V N E G F V D N M T L S	840 270



FIGURE 2C

1260 410	AAGCCCATGGCTTTGGCTTCTCTGCCTTCCAGGCGGAAGATGATGCTGATGACGANTTC K P M G F G F S A F Q A E D D A D D X F	1201 391
1200 390	CTTGCCGCTGGAGCACTGGCTTGGTGGCCGGAGCTCTCTACCTCCGTGCCCGAGGC L A A G A L L G L V A G A L Y L R A R G	1141
1140 370	CAGCCCCAGGCAGTGCTGGCGCNTGAAGCCCCCACCTGTGCGGGGCTGTG Q P Q A V L A X E A P P V A A G V G A V	1081 351
1080 350	GACATCATGGCCTTCAATGGCATCATCCATGCTCTGGCCGCCCCTCCTGGCACCCCCA D I M A F N G I I H A L A S P L L A P P	1021 331
1020 330	AACAGTTCCTGGGCCCCTGTGGCCCCAGGGACAGTTGTGGTTAGCCGTATCATTGTGTGG N S S W A P V A P G T V V V S R I I V W	961
960 310	GGGAAGTTGCTTCCGGCCCACTCAGCCTCATCATCAGTGACGCCCTGAC G K L L P A H S G L S L I I S D A G P D	901
900	GGCCCAAACTTGGAGCTGCATGCCTCCAACGCCACCCAGCCAG	841 271



FIGURE 2D

	AGACAATANNNGTNCCCTCGAG 1522	1501
1500	GGAGACCANTTTATTGCTTGTCTGGGTGGATGGGGCAGGAGGGNCTGAGGGCCTGTCCC	1441
1440 458	CAGAGGATCCTCACAGTCAAGTGACGAGGCTGGGGCTGAAAGCAGGAAGCATGCACAGGGA Q R I L T V K *	1381 451
1380 450	AGCGACACCTTTGTGAACCCTTCGATGACTCACTGCTGGAGGAGGACTTCCCTGACACC S D T F C E P F D D S L L E E D F P D T	1321 431
1320 430	TCACCGTGGCAAGAGGGACCAACCCCACNTTGGTNTNTGTCCCCAACCCTGTCTTTGGC S P W Q E G T N P T L V X V P N P V F G	1261 411

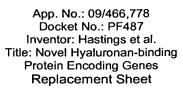




FIGURE 3A

\leftarrow	GCCCACGCGTCCGACCGGGACAGCTCGCGGCCCCCNAGAGCTCTAGCCGTNGAGGAGCTG	09
61	CCTGGGGACGTTTGCCCTGGGCCCCAGCCTGGCCCGGGTCACCCTGGCATGAGGAGATG	120 1
121 2	GGCCTGTTGCTCCTGCTCCTGCTGCCCGGCTCCTACGGACTGCCCTTCTAC G L L L L V P L L L L P G S Y G L P F Y	180 21
181 22	TACGGCTTCTACTACTCCAACGCCCAACGACCAAGGCAACGGTCATGGCAAA Y G F Y Y S N S A N D Q N L G N G H G K	240 41
241 42	GACCTACNTAATGGAGTGAAGCTGGTGGTGGAGACCCCGAGGAGACCCTGTTCACCTAC D L X N G V K L V V E T P E E T L F T Y	300 61
301 62	CAAGGGGCCAGTGTGATCCTGCCCTGCCTACGCTACGAGCCGGCCCTGGTCTCCCCG Q G A S V I L P C R Y R Y E P A L V S P	360 81
361 82	CGGCGTGTGCGTGTCAAATGGTGGAAGGAGAACGGGGCCCCAGAGAAGGACGTG R R V R V K W W K L S E N G A <u>P E K D V</u>	420 101



FIGURE 3

840 241	**************************************	781 222
780	**************************************	721 202
720	**************************************	661 182
660	GAGCTGCGGGTGTGTCTTTCCTTACCAGTCCCCAACGGGCGCTACCAGTTCAACTTC E L R G V V F P Y Q S P N G R Y Q F N F	601 162
600	GGGCGTTACCGCTGTGAGGGTCATNGACGGCTGGGGCTGGAGCTGGGGGTCTGGTGGAGCTGGGGGCTGGGGCTGGGGGGTTGGTGGTGGAGCGGTCTGGTGGAGCGGTCTGGTGGAGCTGGTGGAGCTGGTGGAGCTGGTGGAGCTGGTGGAGCGTCTGGTGAGCGGTCTGGAGCTGAGCGGTCTGGAGCTGAGCGGTCTGGAGCTGAGCGGTCTGGAGCGAGC	541 142
54(141	CGGCAGGACAAAGAGCATGACGTCTCGNTGGAGATCCAGGNTCTGCGGCTGGAGGACTAT R O D K E H D V S X E I Q X L R L E D Y	481
48(CTGGTGGCCATCGGCACCGCTCCTTTGGGGACTACCAAGGCCGCGTGCACCTG ${ m L}$ ${ m V}$ ${ m A}$ ${ m I}$ ${ m G}$ ${ m L}$ ${ m L}$ ${ m I}$ ${ m C}$ ${ m G}$ ${ m C}$ ${ m G}$ ${ m C}$ ${ m C}$ ${ m G}$ ${ m C}$ ${ m G}$ ${ m C}$ ${ m C}$ ${ m C}$	421 102

7



FIGURE 3C

CT 900 261	AA 960 281	
GTGCGAAGCTACGGCCCCCCCCCCCCTGCATGATGTATTCTGCTTCGCT	ACTGCCCTCARGGGGGGGGGTGTACTACCTGGANCACCCTGAGAANCTGACNCTGACANAA	GCAAGGGAAGCCTGCCAAGAAAAT 985
V R S Y G P R H R R L H R Y D V F C F A	T A L X G R V Y Y L X H P E X L T L T X	<u>A R E A C</u> Q E K 289
841	901	961
242	262	282



FIGURE 4A

)	120	.AC 180	; ;AC 240 I 14	AG 300	.cr 360	; 420 , 74	NC 480
GGAATCACATGCACAGTTGTGGATTTTYTGCAAACAGGACAACGGGGGCTGTGCAAAGGTG	GCCAGATGCTCCCAGAAGGCACGAAGGTCTCCTGCAGCTGCCAGAAGGGATACAAAGGG	GACGGGCACAGCTGCACAGAGATAGACCCCTGTGCAGACGGCCTTAACGGAGGGTGTCAC	GAGCACGCCACCTGTAAGATGACAGGCCCGGGCAAGCACAAGTGTGAGTGTAAAAGTCAC M T G P G K H K C E C K S H	TATGTCGGAĞATGGGCTGAACTGTGAGCCGGAGCAGCTGCCTTACAG YVGDGLNCEPEQLPIDRC	GACAATGGGCAGTGCCATGCAGGACGCCAAATGTGTGGACCTCCACTTCCAGGATACCACT D N G Q C H A D A K C V D L H F Q D T T	GTTGGGGTGTTCCATCTACGCTCCCCACTGGGCCAGTATAAGCTGACCTTTGACAAAGCC V G V F H L R S P L G Q Y K L T F D K A	AGAGAGGCCTGTGCCAACGAAGCTGCGACCATGGCAACCTACAACCAGCTCTCCTATNNC R E A C A N E A A T M A T Y N Q L S Y X
	61	121	181 1	241 15	301 35	361 55	421 75



FIGURE 4B



FIGURE 4C

900	960	1020	1080	1140	1200	259
234	254	274	294	314	334	
CTCTTTGTNCCACAGAACAGTGGGCTGGGGGAGAATGAGACCTTGTCTGGGCGGGACATC	GAGCACCACCTCGCCAATGTCAGCATTTTTTTTTTTTTT	CTGCAAACGAGGCTGGGAAGCTGCTCATCACTGACAGAACAGGACCCACTCCACCCG L Q T R L G S K L L I T D R Q D P L H P	ACGGAGACCAGGTGTTGATGGAAGACACTCTGGAGTGGGACATCTGTGCCTCCAAT T E T R C V D G R D T L E W D I C A S N	GGGATCACACTTTCCAGGYÇTTTAAAAGCACCCCCTGCCCCGTGACCTTGNCC GITHVIŞRXLKAPPPAPVTLX	CACACTGGNTTGGGAGNAGGGATCTTCTNTGNCATCATCCTGGTGACTGGGGCTGTTGCC H T G L G X G I F X X I I L V T G A V A	TTGGCTGCTTACTCCTACTTTCGGATAAACCGGAAAACAATCGGCTTCCANCATTTTGA 1253 L A A Y S Y F R I N R K T I G F X H F 353
841	901	961	1021	1081	1141	1201
215	235	255	275	295	315	335



FIGURE 5A

		· 21 -	30	
н н	MWDOGCREIL TM		TTAGPFTVLVPSVSSFSRT WF-HABP (FL).filed.aa	WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)
	9	40	50	
317	MNASLAOOLC		ROHIIAGOHILEDTRTOOTR WF-HABP (FL).filed.aa	WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)
		0/	- 88	
61 7	RWWTLAGOET		中V T F N Q F T K Y S Y K Y K D Q P Q Q WF-HABP (FL), filed.aa 	WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)
	7(100	110 120	
27	TFNIYKANNI		AANGVFHVVTGLRWOAPSGT WF-HABP (FL).filed.aa 	WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)



FIGURE 5B



FIGURE 5C

WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)	7. 1. S WF-HABP (FL).filed.aa - Human TSG-6 (gi 339994)) [WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)
250 270 NGVIHWLDGILLPPTILPILP WF-HABP (FL).filed.aa	180 300 300 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	320 330 CVVIHDPTGENVLKKGCASVC WF-HABP (FL).filed.aa
250 ANGVIHMEDGI		310 SECVYIHDPTGE
241 LORVDVMAA 52	271 KHCSBEOHK 52	301 VKLDIFPKE 52

App. No.: 09/466,778
Docket No.: PF487
Inventor: Hastings et al.
Title: Novel Hyaluronan-binding
Protein Encoding Genes
Replacement Sheet



FIGURE 5D

331 52	NOTIMEOGCCKGFFGPDCTOCPGGFSNPCY WE-HABP (FL).filed.aa	360 FCV WE-HABP (FL), filed.aa
361	G K G N C S D G T Q G N G A C L C F P D Y K G T A C H T C S ME LAND (ET)	390 (TES (123) 0 dark - 117) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
R		Human TSG-6 (gi 339994)
391	NPNKHGEOCOEDCGCVHGLCDNRPGSGGVC WF-HABP (FL).filed.aa	GGVC WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)
(b	450
77 73	UOGTCAPGFSGRFCNESMGDCGPTGLAOHC	Off C WF-HABP (FL).filed.aa Human TSG-6 (gi 33994)



FIGURE SE

THE PAIN THE FOR THE PAIN WE-HARD (FT.) FILED AS	1339994 Human TSG-6 (gi 339994)
--	--------------------------------------



FIGURE 5F

-r- 600 	τ π 	Human TSG-6 (gi 339994)	WF-HABP (FL).filed.aa Human TSG-6 (qi 339994)
O WF-HABP (F Human TSG-	_ 0 WF-HARD (F	Human TSG-) WF-HABP (FI Human TSG-(
E S M E M O .	630 BBBBB		LARLGGOE
580 600 G.L.E.L.E.A.N.A.H.F.S.I.F.Y.O.W.L.K.S.A.G.I. WF-HABP (FL).filed.aa	610 620 630 FALVPSEAAVROLSPEDRAFMT WF-HARP (FT) files		
EAGNGGCHGLELE	610 TLPADRRVTALVP		OPRTEPNEVRAHE
571 R	= 1	•	631 0 52 -



F 75 75 75 75 75 75 75 75 75 75 75 75 75	670	670	WF-HABP (FL).filed.aa Human TSG-6 (gi 339994) WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)
25.12.22	TEVPTNRSLEAGENSSHLDADTVRHHVVL WF-HABP (FL).filed.aa	12	WF-HABP (FL).filed.aa Human TSG-6 (gi 339994) WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)



FIGURE 5H

781	790 800 810 GEALSWETLRKGGHRNSLLGPAHWIVFYNH WF-HABP (FL).filed.aa	WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)
811	820 830 840 S G O P E V N H V P L E G P M L E A P G R S L I G L S G V L WF-HABP (FL).filed.aa	WF-HABP (FL).filed.aa Muman TSG-6 (gi 339994)
841	841 TVGSSRCLHSHAEALREKCVNCTRRFRCTO WF-HABP (FL).filed.aa 94 Human TSG-6 (gi 33999	WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)
871.	880 900	WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)



FIGURE 51

WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)	-) WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)	-) WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)
910 KIOVPDCCPGFFGTLCEPCPGGLGGVCSGH WF-HABP (FL).filed.aa	940 950 960 GOCODRFLGSGECHCHEGFHGTACEVCELG WF-HABP (FL).filed.aa	8. V G P N C. T G V C D C A H G L C O E G L O G D G S C V C N WF-HABP (FL). filled. aa
28	931	961



FIGURE 5.1

1020 D WF-HABP (FL).filed.aa - Human TSG-6 (gi 339994)	1050 	80 WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)	lu WE-HABP (FL).filed.aa Human TSG-6 (qi 339994)
1010 1020 100 1010 1020 100 KITSPOCPRKCDPNANCVOD WF-HABP (FL).filed.aa	1040	60 1070 1080 'KVAPGORTCTCODGYMGDGE WF-HABP (FL).filed.aa	HHGGCHIHAECIPTGPOOVS WF-HABP (FL).filed.aa
VGWOGLRCDOKITSP	1021 S A G A S T C A C A A G Y S G 94	1060 G G C S P H A N C T K V A P G	LCOETNSCLIHHGGC
991	1021	1051 J	1081



FIGURE 5K



; 5L

7- 1260 WF-HABP (FL).filed.aa 	7- 290 WF-HABP (FL).filed.aa - Human TSG-6 (gi 339994)	1320
1250 Y A T A L S G H P L	1280 DHEAVNGILH 	O PRRNVTAA PKRTKAT
CRRLRSEDLLEOG	SIVINDFARVVSS	
1 1231 RYHVVGCRR 109	1261 FSEREGSIV 109	1291 I.D.R.V.L.L.P.P.E 109



FIGURE 5M

	1. 133	0	1340 13	1350
1321	1321 GFGYKTFSG1 130		LREASHRPFT	LKVAGLIPLLREASHRPFRWWF-HABP (FL).filed.aa
1351	136 1351 LWPTDAAFRA 130	LPPDROAW	M M	1380 A A WF-HABP (FL).filed.aa L Human TSG-6 (gi 339994)
1381 151	139 1381 I L R G H W I R N V 151		1400 14 V L G P L R T M H G T	D 1400 1410 1410 1410 1410 1410 1410 141
1411	142 142 ISFSCSRTR	0.7	1430 ARIVORHEPE	1440 1 1 WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)



FIGURE 5N

	14	1 450	1460	1470
1441	1441 GGLAYGIDO 151		RCDHFETRPI	LTEPPGLGARCDHFETRPLRI WF-HABP (FL).filed.aa
1471	1471 NTCSICGLE	77	1490 G S P E A C W R E	180 1490 1500 18
1501	1501 KFWTSPPLH 151		1520 HPSLWGRPOC	510 1520 1530 SEGERSVWVHPSLWGRPQGLG WF-HABP (FL).filed.aa
1531	RGCHRNCVT	540 T'TWKPSCOP	1550 GHYGSECOA	1550 1560 1550 1560



FIGURE 50

) WF-HABP (FL).filed.aa Muman TSG-6 (gi 339994)	1620 R C D E G L WF-HABP (FL).filed.aa K C N I G - Human TSG-6 (gi 339994)	1650 P WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)
570 6 V C M D G M S G S G O C L C R S G F A G WF-HABP (FL).filed.aa	600 A F G P H C O A C R C T V H G R C D E G L WF-HABP (FL).filed.aa	630 1640 1650 EGWTGPRCEVOLELOPVCTPP WF-HABP (FL).filed.aa
1580 CMDGMSGSGOC	1610 3 P H C O A C R C P V	1640 I T G P R C E V O L E
1570 1561 GPSSPCSDRGV 151	1591 TACELCAPGAF (1621 GGSGSCFCDEG
1561	1591	1621



FIGURE 5P

V	1650 1680 1670 1680 1651 CAPEAVCRAGNSCECSLGVEGORVCTVAD WF-HABP (FL).filed.aa 166 Human TSG-6 (gi 33999 169 1700 1710 1681 LCODGHGCSEHANCSOVGTWVTCTCLPDY WF-HABP (FL).filed.aa	1680 1680 1680 1710 1710 1710 1710	WE-HABP (FL).filed.aa Maman TSG-6 (gi 339994) WE-HABP (FL).filed.aa Maman TSG-6 (gi 339994)
(B)	1720 1740 EGDGWSCRARNPCTDGHRGGCSEHANCLST WF-HABP (FL).filed.aa	1740 SEHANCLST 	WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)
1 1 1 1	1750 1770 GLNTRRCECHAGYVGDGLOCLEESEPPVDR WF-HABP (FL).filed.aa	1770. ESEPPVDR W	WF-HABP (FL).filed.aa Human TSG-6 (gi 339994)



1831 175

1861 175

CLGOPPCHSDAMCTDLHFOE	E 5Q K R A G V F H
ATSGPYGLNFSEAEAACEAOG	F S E A E A A C E A O G A V L A S F P O L WF-HABP (FL).filed.aa
DCGNGRVGIVSLGARKNLSER	LCLWGWLANGSTAHPVVFPVA WF-HABP (FL).filed.aa

1801 175



-9-9444		FIC	FIGURE SR	
		1900	1910	1920
1891	DVACRCRN	GFVGDGISTC	NGKLLDVLAAT	1891 DVACRCRNGFVGDGISTCNGKLLDVLAATA WF-HABP (FL).filed.aa 175 Human TSG-6 (gi 339994)
		1930	1940	1950
1921	NFSTFYGM	LEGYANATOR	GLDFLDFLDDE	1921 NFSTFYGWLLGYANATORGLDFLDFLDDEL WF-HABP (FL).filed.aa 175 Human TSG-6 (gi 339994)
· · · · · · · · · · · · · · · · · · ·		1960	1970	1980
1951 175	TYKTLFV	VNEGFVDNMT	LSGPNLELHAS	PVNEGEVDNWTLSGPNLELHASN WF-HABP (FL).filed.aa



		FIGURE 55		
1981	ATLLSANA	2000 KLLPAHSGLSI	1990 2010 SOGKLLPAHSGLSLIISDAGPD WF-HABP (FL).filed.aa	~
2011	NSSWA:PVA	2030 VVSRIIVWD	2020 2030 2040 P.G.T.V.V.V.S.R.I.I.V.W.D.I.W.A.F.N.G.I.I.H WF-HABP (FL).filed.aa	
2041	2050 2041 ALASPLLAPPOP 175	2060 O A V E A X E A P P	2050 2050 2050 P P P P V A A G V G A V WF-HABP (FL).filed.aa 	_
2071	2071 LAAGALLGLVAG 178	2090 ALYLRARGKP	2080 2100 2090 2100 LV LRARGKPMGFGFSAF WF-HABP (FL).filed.aa	



FIGURE 5T

		2110	2120	2130
2101 178	OAEDDADI	XFSPWOEGTN	EGTNPTLVXVPNPV	DXESPWOEGTNPTLVXVPNPVEGWE-HABP (FL).filed.aa
		2140	2150	7.0000 1.000
2137	SDTFCEPF	2181 SDTECEPFDDSLLEEDFPDTORILTVR	DTORILTVE	3,1
	Decoration 'Decoratic	on #1': Shade (with	Decoration 'Decoration #1': Shade (with solid black) residues that match the Consensus exactly.	that match the



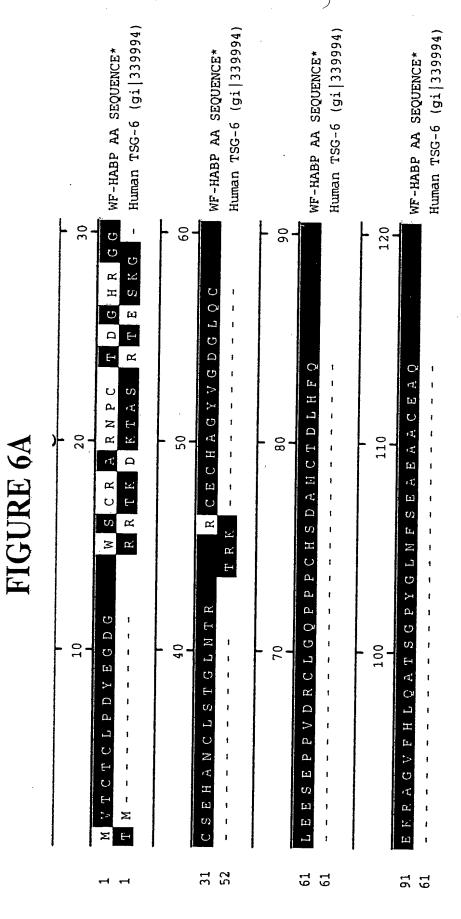




FIGURE 6B

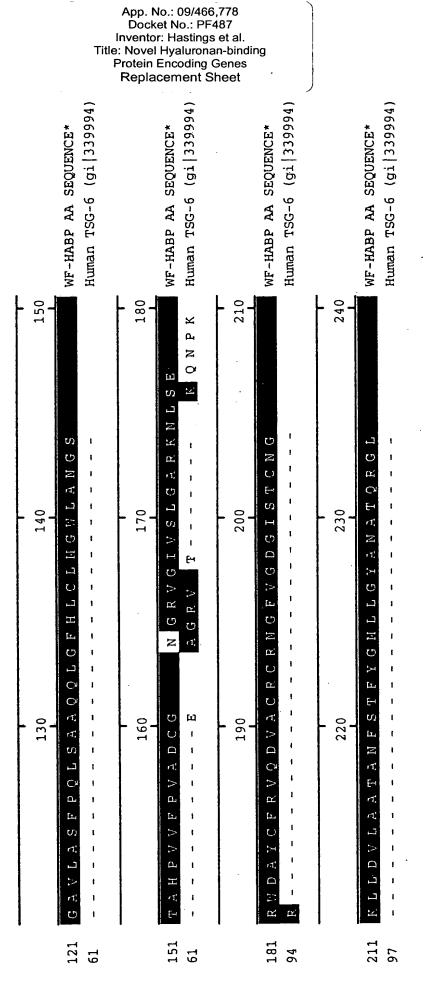




FIGURE 6C

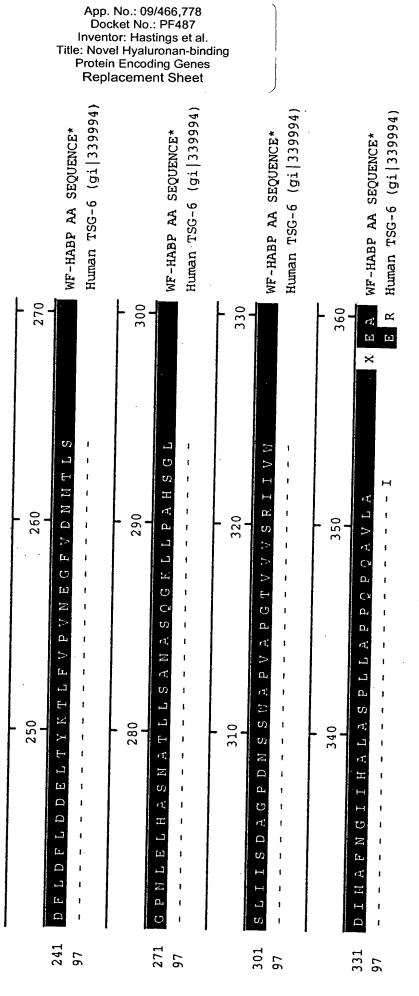
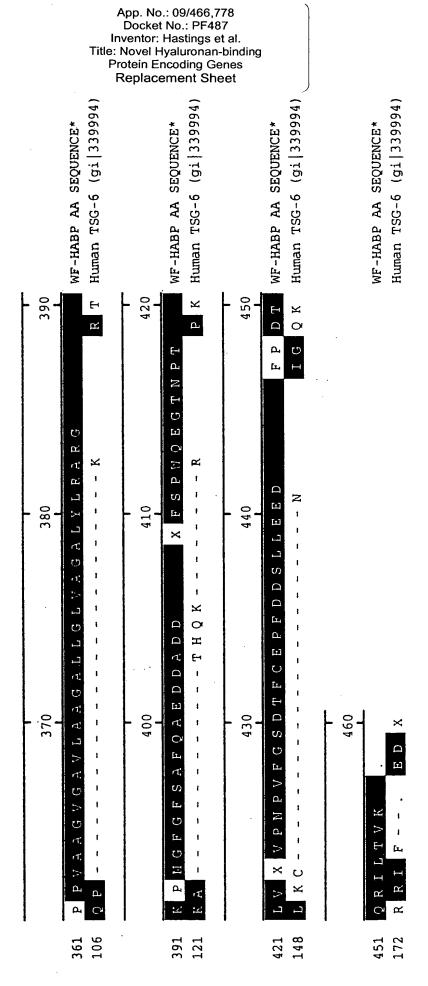




FIGURE 6D



Decoration 'Decoration #1': Shade (with solid black) residues that match the Consensus exactly.



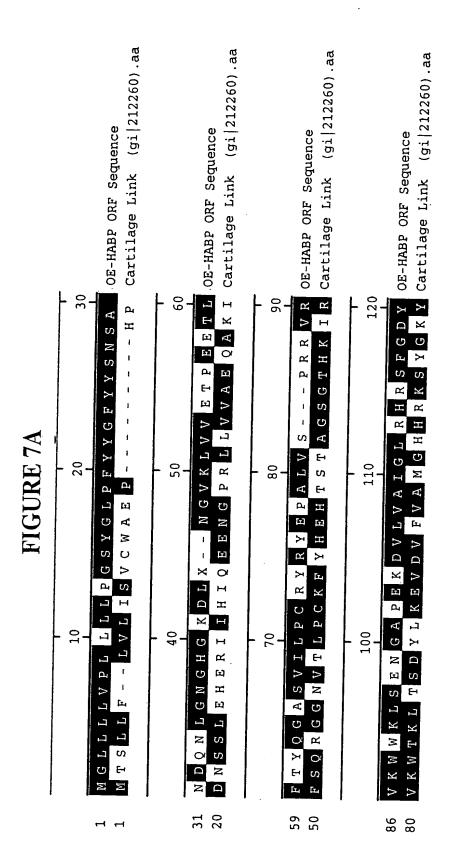




FIGURE 7B



FIGURE 7C

OE-HABP ORF Sequence Cartilage Link (gi 212260).aa	OE-HABP ORF Sequence Cartilage Link (gi 212260).aa	OE-HABP ORF Sequence Cartilage Link (gi 212260).aa
PRHRRLHRYDVFCFA TALX OE-HABPORF Sequence	290 300 LTLT X A R E A C Q ОЕ-НАВР ОКГ Sequence LT Y D E A V Q A C L K D G A Q I A K Cartilage Link (gi 212260).aa	320 330
250 236 P D L A P G V R S Y G P 230 K N T V P G V R N Y G F	280 266 G R V Y Y L X H P E X L 1 260 G R F Y Y L I H P T K L 7	290 V G Q I F A A W K L L G Y



Cartilage Link (gi|212260).aa

OE-HABP ORF Sequence

0.5	OE-HABP ORF Sequence Cartilage Link (gi 212260).aa
340 350 360	SRPRKRCSPNEAAVRFVGFPDKKHKLYGVY

Decoration 'Decoration #1': Shade (with solid black) residues that match the Consensus

exactly.

350



FIGURE 8A

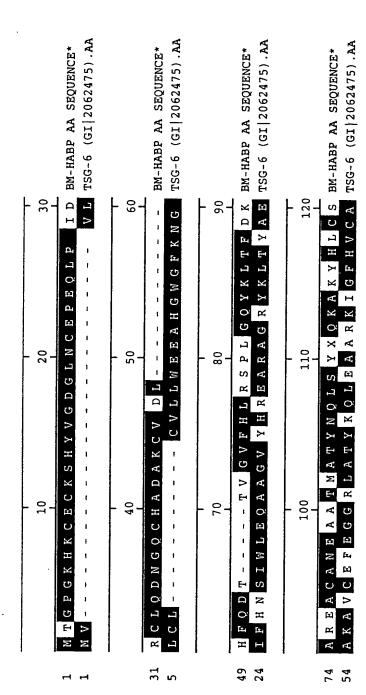


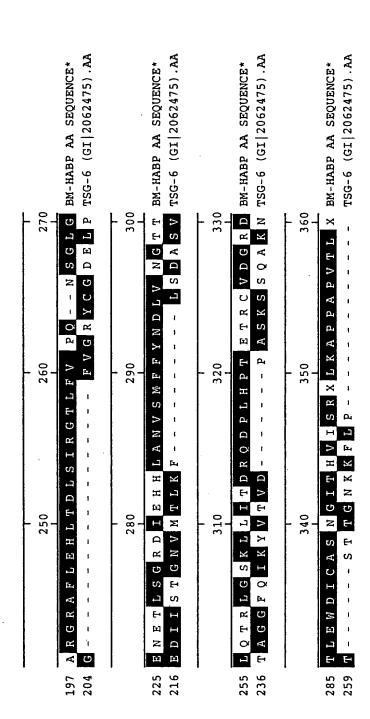


FIGURE 8E

** .AA	;* AA	.AA	* *
140 150 S O N C G S G V V G I V D Y BM-HABP AA SEQUENCE* G P N C G F G K T G I I D Y TSG-6 (GI 2062475).AA	180 	210 Q V BM-HABP AA SEQUENCE* R I TSG-6 (GI 2062475).AA	BM-HABP AA SEQUENCE* TEG-6 (CT12062475) AA
ABP AA . 6 (GI 2	ABP AA :	ABP AA 3 6 (GI 20	ABP AA
O BM-H.	180 K BM-H	O BM-HL TSG-	DM-H
140 SONCGSGVVGIVDY GPNCGFGKTGIDV	180 1	·	EVLAYS NS S
V G I		- X	A Y >
ւ Տ Ծ Ծ	N C T X G G G	I R L	E V L A
140 1 C G	170 M K D V N P H A K E	200 N L L N Q V C Y W H I R L K Y G Q	230 7 L T
A A	R M M T	1 T - O O	LTN
T A F I V K	160 G P R P N K S E M W D V F C Y R G I R L N R S E R W D A Y C Y N		1 C
130 A G W L E T G R V A Y P T A A G W M A K G R V G Y P I V	160 M M D V R W D A	- 1 N E	220
GRV	α Ed Ed St	V G Y V G D G F S R I F K S P G F P	220 1 LMSFPSLTNFLT HISFLOFOLFHDPGCLAD VVF
T E M	P N K	V G D K S P	다 다 다 다 다 다
AGWLE AGWMA	G P R G I R	V G Y R I F	L M S
104	134	159 144	176



FIGURE 8C







DM-HABP AA SEQUENCE* TSG-6 (GI 2062475).AA	BM-HABP AA SEQUENCE* TSG-6 (GI 2062475).AA
390 1 F R I N L	
380 LVTGAVAL AAYSYFR GRFSHL	
370 380 390 315 H T G L G X G I F X X I I L V T G A V A L A A Y S Y F R I N BM-HABP AA SEQUENCE* 270 G R F S H L TSG-6 (GI 2062475).A	345 RKTIGFXHF 276
315	345 276

Decoration 'Decoration #1': Shade (with solid black) residues that match the Consensus exactly.



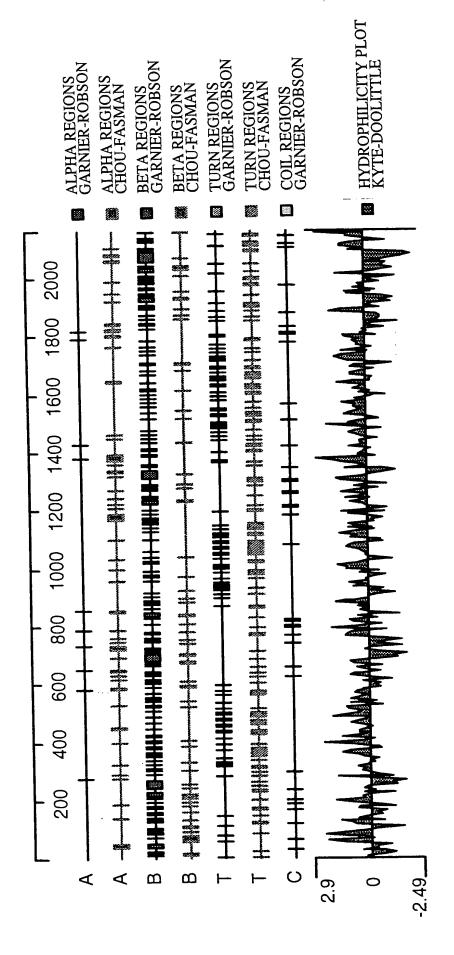
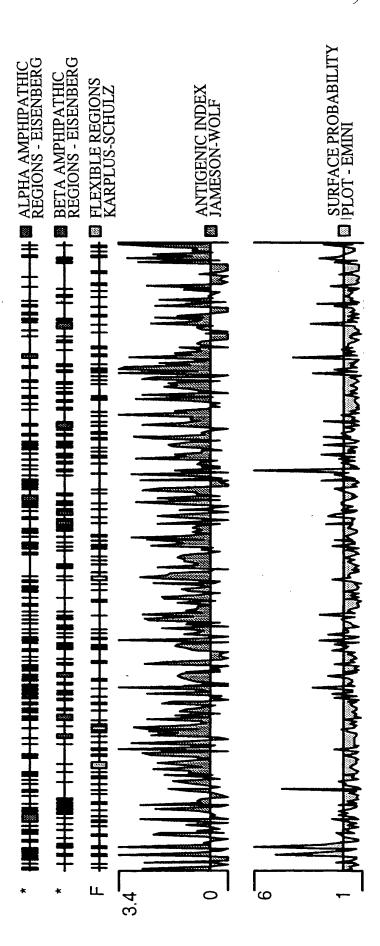


FIGURE 9A

FIGURE 9B

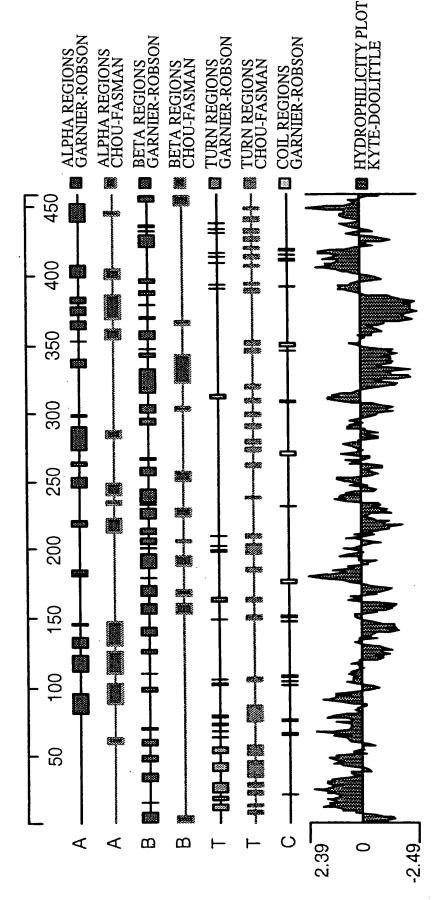
App. No.: 09/466,778
Docket No.: PF487
Inventor: Hastings et al.
Title: Novel Hyaluronan-binding
Protein Encoding Genes
Replacement Sheet



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FIGURE 10A



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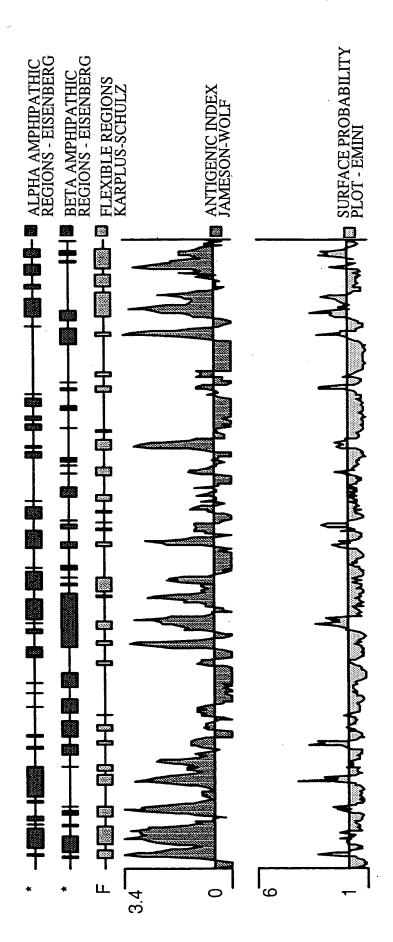
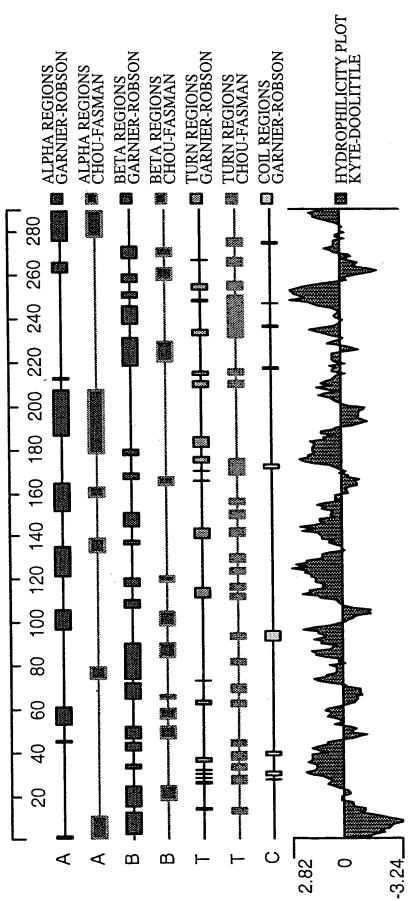


FIGURE 10B



FIGURE 11A

App. No.: 09/466,778
Docket No.: PF487
Inventor: Hastings et al.
Title: Novel Hyaluronan-binding
Protein Encoding Genes
Replacement Sheet



MANUABLE COPY

FIGURE 11B



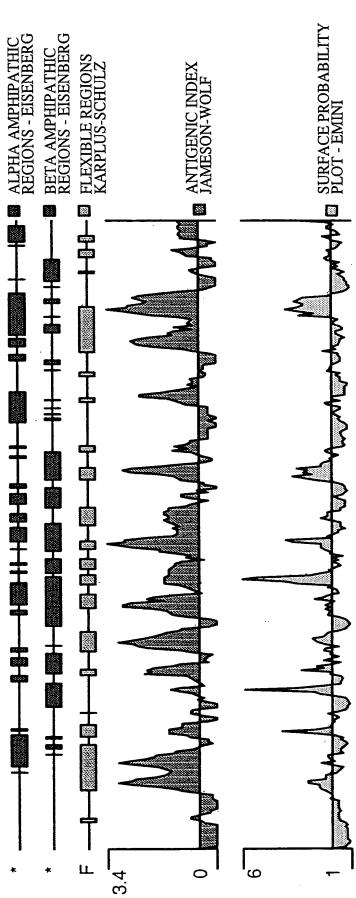
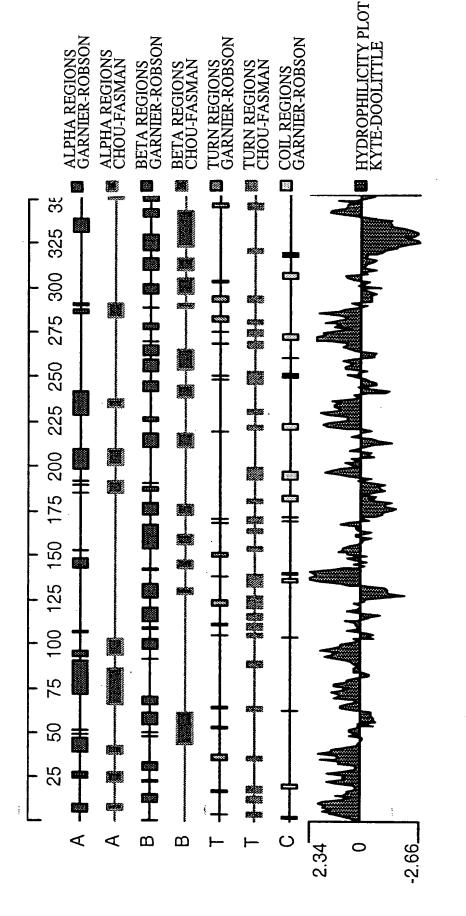


FIGURE 12A



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FIGURE 12B



